

## CLAIMS

What is claimed is:

1. A power drill chuck comprising a drill body, a nut, jaws, a front sleeve, a rear sleeve, a nut sleeve, a rolling body, wherein the three jaws are mounted respectively in three inclined holes which are trisection of the drill body, the nut thread constitutes a thread drive together with the thread of the jaws mounted in the three inclined holes of the drill body, the front sleeve is fixedly connected with the drill body, what is characterized in that the nut sleeve is fixedly connected to the nut and extends backwards, in a rear end of which a plurality of projecting keys are provided, the rear sleeve is mounted around the rear portion of the nut sleeve and may rotate relative to the nut sleeve and the drill body, the rear sleeve is provided with piecewise annular holes on its rear end surface and a plurality of keys on its inner end surface, a positioning sleeve is fixedly connected to the rear portion of the drill body to position axially the rear sleeve on the drill body, a plurality of elastic impact members are mounted between the nut sleeve and the rear sleeve, the elastic impact members are provided with a plurality of elastic deformation portions and a plurality of projecting keys.

2. The power drill chuck as described in claim 1, wherein there is a location ring provided at the rear sides of the rear sleeve and the drill body, the location ring is provided with a plurality of connecting keys and connecting holes.

3. The power drill chuck as described in claim 2, wherein there is an anti-friction ring or bearing provided between an exterior wall of the nut sleeve and an inner wall of the rear sleeve.

4. The power drill chuck as described in claim 1 or 2, wherein both side surfaces of the projecting keys at the rear end of the nut sleeve in the direction of circumference are slopes.

5. The power drill chuck as described in claim 1 or 2, wherein the elastic impact member is mounted on the keys of the rear sleeve.

6. The power drill chuck as described in claim 1 or 2, wherein both side surfaces of the projecting keys of the elastic impact member in the direction of circumference are slopes.

7. The power drill chuck as described in claim 1 or 2, wherein the elastic impact member is provided with cam curved surfaces changed in the direction of the axis of the drill chuck.

8. The power drill chuck as described in claim 1 or 2, wherein the elastic deformation portions of the elastic impact member are separate elastic deforming elements apart from the elastic impact member.

9. The power drill chuck as described in claim 1 or 2, wherein the keys at the inner end face of the rear sleeve is provided with pawls.